FOR IMMEDIATE RELEASE

Merrimack Pharmaceuticals Initiates Enrollment in Phase 1 Combination Study of MM-121 and paclitaxel in Gynecologic and Breast Cancers

CAMBRIDGE, Mass., December 1, 2010 – Merrimack Pharmaceuticals, Inc. announced today that the first patient has received an initial dose in a Phase I clinical study combining MM-121 with paclitaxel in gynecologic and breast cancer patients.

MM-121, Merrimack's lead oncology therapeutic candidate, is an antibody designed to block signaling of ErbB3. ErbB3 has been shown to be a central signaling node in the ErbB pathway, and is believed to play a critical role in the development of resistance to most of the currently available anticancer therapies. Paclitaxel is a chemotherapy agent.

"MM-121 has shown, in pre-clinical research models, the ability to significantly enhance the antitumor activity of paclitaxel. This clinical trial is designed to evaluate the safety of various dosing regimens for MM-121 when used in combination with paclitaxel and will hence facilitate further clinical testing to evaluate the efficacy of this combination regimen as a new anticancer treatment," said William Kubasek, a Vice President at Merrimack and the MM-121 development project team leader.

The first patient in this study was enrolled at Pinnacle Oncology Hematology in Scottsdale, Arizona, one of multiple study sites participating in this trial. This Phase I clinical study is a collaboration between Merrimack and sanofi-aventis, which is part of an exclusive, global collaboration and licensing agreement for MM-121 entered into by the companies in 2009.

MM-121 is a monoclonal antibody designed to block signaling of the ErbB3 receptor. ErbB3 is a member of the ErbB family consisting of four different receptors, ErbB1 (a.k.a. EGFR), ErbB2 (Her2), ErbB3 (Her3) and ErbB4 (Her4). ErbB3 pairs up with the other receptors within the same family to form potent signaling complexes. These receptors play a critical role in cancer signaling. MM-121 was the first engineered antibody that emerged from Merrimack's Network Biology platform, as well as the first selective ErbB3 antagonist to enter human clinical development. MM-121 is being studied in a Phase 2 study in combination with exemestane in breast cancer patients, a Phase 1/2 study in combination with erlotinib in patients with non-small cell lung cancer and a Phase 1 dose escalation trial testing the safety and pharmacokinetics of MM-121. Preclinical data exhibiting MM-121's impact on multiple cancer models were presented at the 2010 annual meeting of the American Association for Cancer Research.

About Merrimack

Merrimack Pharmaceuticals, Inc. is a biopharmaceutical company dedicated to the discovery and development of novel medicines for the treatment of cancer and inflammation. The Company is advancing a robust pipeline of engineered therapeutics paired with molecular diagnostics. Merrimack has three oncology candidates in clinical development: MM-121, partnered with sanofi-aventis, in Phase 2 clinical testing, MM-111 in Phase 1/2 clinical testing, MM-398, partnered with PharmaEngine, Inc., in Phase 2 clinical testing and multiple pre-clinical development and research stage programs in the pipeline. MM-121, MM-111, and MM-398 are investigational drugs and have not been approved by the U.S. Food and Drug Administration or any international regulatory agency. The Company's proprietary Network Biology discovery platform, developed with the help of leading scientists from MIT and Harvard,

integrates the fields of engineering, biology and computing to enable mechanism-based model driven discovery and development of both therapeutics and diagnostics. Merrimack is a privately-held company based in Cambridge, Massachusetts. For additional information, please visit http://www.merrimackpharma.com.

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